AMENDMENTS TO THE SPECIFICATION:

Please insert at page 1, line 5, the following paragraph:

--This application is a division of Application No. 09/871,637 filed June 4, 2001, now allowed.--

Please substitute the following paragraph for the paragraph starting at page 1, line 18 and ending at page 2, line 2.

FIG. 1 of the accompanying drawings schematically illustrates a linear actuator that utilizes an electromagnetic force for positioning the head of a hard disk as disclosed in U.S. Patent No. 5,724,015. Referring to FIG. 1, the actuator comprises a pair of cores 1004a, 1004b rigidly secured to a substrate (not shown) and a pair of coils 1005a, 1005b wound around the respective cores along with a movable member 1003 so supported by springs 1007 as to be movable relative to the cores 1004a, 1004b. The above-described ~~above~~ structure is formed on the substrate by means of micromachining ~~the micro-machining~~ technology.

Please substitute the following paragraph for the paragraph starting at page 3, line 14 and ending at page 3, line 16.

According to the invention, the above-described ~~above~~ object is achieved by providing an electromagnetic actuator comprising:--

Please substitute the following paragraph for the paragraph starting at page 8, line 3 and ending at page 8, line 7.

It is possible to prepare an optical scanner comprising an electromagnetic actuator according to the invention by micromachining ~~micro-machining~~ to make the deflector show an excellent energy efficiency and a wide angle of deflection.

Please substitute the following paragraph for the paragraph starting at page 17, line 17 and ending at page 18, line 1.

Now, a ~~the~~ method used for preparing the actuator of this example will be described below. In this example, the stationary member 102, the movable member 103, the movable core 104a, the stationary core 104b, the movable coil 105a, the stationary coil 105b, the movable coil 105a, the support member 106 and the parallel hinged springs 107 are prepared by means of micromachining ~~the micro-machining~~ technology. Coil lower surface wiring 114, coil lateral surface wiring 115 and coil upper surface wiring 116 are prepared in the above mentioned order for both the movable coil 105a and the stationary coil 105b (see FIG. 5L).

Please substitute the following paragraph for the paragraph starting at page 21, line 19 and ending at page 22, line 24.

FIGS. 7A and 7B are schematic views of the reflection type optical scanner of Example 2, illustrating the principle underlying the operation thereof. Referring to FIGS. 7A and 7B, reference symbols 312 and 313 respectively denote a semiconductor laser and a laser beam. The semiconductor laser 312 is arranged in such a way that the laser beam 313 strikes the mirror 311. The semiconductor laser 312 may be located on the substrate 301 shown in FIG. 6 or at some other position. As the movable coil 305a and the stationary coil 305b are electrically energized, the movable member 303 and the stationary member 302 attract each other. FIG. 7A shows the state where the movable coil 305a and the stationary coil 305b in FIG. 6 are not electrically energized, whereas FIG. 7B shows the state where the movable coil 305a and the stationary coil 305b in FIG. 6 are electrically energized. As seen from FIGS. 7A and 7B, the direction of the laser beam 313 is modified as the movable coil 305a and the stationary coil 305b are electrically energized. The electromagnetic actuator used in the optical scanner of this example showed an excellent

energy efficiency because the leakage of magnetic flux is minimized if compared with conventional electromagnetic actuators. Additionally, since the movable member and the stationary members comprise respective coils and cores, the number of turns of the coils can be raised to increase the force generated in the actuator. Thus, a reflection type optical scanner that shows an excellent energy efficiency and a large deflector angle can be prepared by micromachining ~~micro-machining~~, using an electromagnetic actuator like the one prepared in this example.

Please substitute the following paragraph for the paragraph starting at page 24, line 7 and ending at page 25, line 4.

FIGS. 9A and 9B are schematic views of the transmission type optical scanner of Example 3, illustrating the principle underlying the operation thereof. Referring to FIGS. 9A and 9B, reference symbols 412 and 413, respectively, ~~respective~~ denote a semiconductor laser and a laser beam. The semiconductor laser 412 is arranged in such a way that the laser beam 413 is transmitted through the lens 411. The semiconductor laser 412 may be located on the substrate 401 shown in FIG. 8 or at some other position. As the movable coil 405a and the stationary coil 405b are electrically energized, the movable member 403 and the stationary member 402 are repulsed from each other. FIG. 9A shows the state where the movable coil 405a and the stationary coil 405b in FIG. 8 are not electrically energized, whereas FIG. 9B shows the state where the movable coil 405a and the stationary coil 405b in FIG. 8 are electrically energized. As seen from FIGS. 9A and 9B, the direction of the laser beam 413 is modified as the movable coil 405a and the stationary col 405b are electrically energized. Thus, a transmission type optical scanner that shows an excellent energy efficiency and a large deflector angle can be prepared by micromachining ~~micro-machining~~, using an electromagnetic actuator like the one prepared in this example.

Please substitute the following paragraph for the paragraph starting at page 25, line 22 and ending at page 25, line 27.

Similarly, according to the invention, a transmission type optical scanner showing a large deflection angle and a high energy efficiency and comprising a lens and an electromagnetic actuator mechanically connected to the lens can be prepared by micromachining ~~micro-machining~~.